
| RESEARCH ARTICLE

Synergizing Qualitative Research: The Role of Artificial Intelligence (AI) in Online Focus Group Transcription and English Translation

Mustafa M. Bodrick^{1, 2, 3}, Lobna A. Aljuffali¹, Aisha S. Albuluwi¹, Aws A. Obaid¹, and Mutlaq B. Almutairi^{4, 5}

¹ Saudi Commission for Health Specialties, Saudi Arabia

² MAHSA University, Malaysia

³ Johns Hopkins University, Baltimore, USA

⁴ King Fahad Medical City, MOH, Riyadh

⁵ Doctoral Program, University of Johannesburg, South Africa

Corresponding Author: Professor Mustafa M. Bodrick, **E-mail:** mustafabodrick@gmail.com

| ABSTRACT

Continuous advancement in artificial intelligence (AI) and large language models (LLMs) has considerably transformed the process of collecting and analysing qualitative data. The aim of this literature review is to assess and provide evidence on the merits of synergizing AI in conducting research involving focus groups in qualitative studies, through the production of transcripts, and translating transcripts written in different languages into English. The key concepts examined in the literature review include the use of AI/LLM models in data recording and transcription, and the use of AI in translation and analysis. A review of current literature shows that researchers utilize AI and LLM tools such as Google AI and ChatGPT to record and translate into English focus group transcripts. The main benefits attributed to the use of these technological tools in qualitative research are that less time and finances are used to collect and analyse transcribed data. On the use of AI/LLM models in recording and transcription, the literature review demonstrates that the adoption of the technologies in qualitative research improves participant engagement in online data collection processes for focus groups. Applications such as AI-supported natural language processing (NLP) and LLMs enable data translation in large-scale, multilingual qualitative research. NLP also helps to save costs and time associated with manual transcription, especially in large multilingual research projects. Reliable audio considered to be credible research evidence for analysis can also be generated using modern NLP models. Furthermore, the use of AI or data transcription in online focus group research enhances the accuracy and applicability of the generated data. Literature evidence highlights that modern AI/LLM tools can be used to attain more than 90% accuracy in data transcription to generate reliable data for initial drafts. On the use of AI for data translation, the literature review indicates that advanced LLMs improve efficiency and fluency in data translation, but that human moderation is essential to detect errors since some AI models are unreliable in translating complex sentences with culture-specific phrases. In summary, the literature review emphasizes that the use of AI, LLMs, and NLP models in online focus group research makes it easy to record, transcribe, and translate data.

| KEYWORDS

Artificial intelligence (AI), large language models (LLMs), online focus groups, transcriptions, qualitative research, multilingual

| ARTICLE INFORMATION

ACCEPTED: 06 August 2026

PUBLISHED: 07 September 2026

DOI: 10.32996/ijtis.2026.5.5.3

Introduction

Advances in artificial intelligence (AI) and large language models (LLMs) have substantially transformed the collection and analysis of qualitative data. Literature evidence documents that researchers use online AI/LLM tools like ChatGPT and Google AI to record and translate into English focus group transcripts in other languages. The cited benefits of AI/LLMs are less time and money spent collecting data and analyzing transcribed data. The purpose of this literature review and analysis is to examine and

Copyright: © 2026 the Author(s). This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC-BY) 4.0 license (<https://creativecommons.org/licenses/by/4.0/>). Published by Al-Kindi Centre for Research and Development, London, United Kingdom.

support the use of AI in conducting online focus groups, generating transcripts, and translating transcripts into English for qualitative research. AI/LLMs are suitable for online focus group data collection sessions because they boost efficiency and scalability of qualitative data analysis, but human input is essential to address cultural nuance and reduce privacy concerns.

Use in Recording and Transcription

The implementation of AI/LLMs in qualitative research aids participant involvement in online focus group data-collection efforts. First and foremost, Olawade et al. (2025) note, the virtual space formed by the Zoom and Microsoft Teams setup permits respondents to interact with researchers, notwithstanding their geographical location. The researchers/data collectors transcribe the high-quality audio records with AI tools, which also potentially assists in the data analysis. Parker et al. (2023) argue that automatic transcription with the aid of natural language processing (NLP) makes qualitative data analysis more efficient and reliable. Efficiency and reliability are maintained by converting spoken conversations into searchable text. Hence, researchers contend with minimized manual workload and transcription bias. Despite the described efficiencies, researchers need to be wary about potential data loss or distortion when relying solely on automated transcription tools.

AI-supported NLP and LLMs facilitate data translation in multilingual and large-scale qualitative research. According to Rosenberg and Mojadeddi (2024) the use of NLP saves both the time and costs of manual transcription, which was always a daunting task in large multilingual research projects. Jimenez-Crespo (2025) favor the use of AI, LLMs, and NLP, arguing that the concept of AI tool-automated transcription and recording fits into the human-centered approach paradigm of AI. Accordingly, this paradigm improves researchers' capacity to avoid tedious data collection and analysis tasks. As such, the reduction in repetitive tasks frees up cognitive resources so the researcher can engage in higher-order analytical work. Collectively, these researchers support the use of AI in recording and transcription to enhance qualitative research's scalability and analytical focus.

The use of AI in online focus group transcription increases the accuracy and usability of gathered data. As per O'Connor Russell et al. (2024), automated transcription was initially criticized for being prone to errors. However, reliable audio regarded as credible evidence for analysis can be produced by the modern NLP models. Shukla (2022) avers that modern AI/LLM tools achieve over 90% accuracy in transcription to yield reliable data valuable in developing an initial draft document to aid the analysis process. Correspondingly, Tolle et al. (2024) state that the accuracy in transcription patterns of some AI aids is 100%. These studies note AI's ability to give correct transcriptions, however, limited mention is made of misattributed speakers or missed pause errors that can change implied meanings in audio transcripts. Rosenberg and Mojadeddi (2024) state that such errors can hinder broad thematic identification, derailing a study's credibility. Reflecting on the analysis, it is prudent for researchers to manually verify transcribed data to ensure interpretive validity.

Use of AI in Translation

It is important to note that LLMs can outperform conventional methods in processing large data volumes. Dinh (2025) agrees that LLMs' more powerful statistical modeling capabilities enable them to generate coherent data drafts compared to the previous generation of AI. Advanced LLMs enhance fluency and efficiency in translating, albeit with human supervision. Yakhni and Chehab (2025) assert that LLMs require a human moderator and indicate that certain AI systems struggle to translate complex sentences with culturally dissimilar idioms. Roberts et al. (2024) continue to debate how broad arrays of unique idioms and sociolinguistic architecture or layers of meaning convey an emotional subtext or subverb within explanation by sources. Within a qualitative research framework, specified idioms and sociolinguistic architecture play a pivotal role in defining and explaining the accounts of sources. Cultural context also needs to be properly understood to increase the plausibility of research findings (Huang et al., 2024). Indeed, the literature review shows that AI/LLM can accelerate and enhance the efficiency of data transcription but should follow a well-developed methodological framework and support.

Researchers find that translations by highly competent AI/LLMs are more fluent and contextually accurate. Researchers including Abdelhalim et al. (2025) contend that ChatGPT is more accurate at translating data than Google Translate due to its ability to capture key aspects of metaphorical and textual flow language. At the same time, Dinh (2025) affirms that highly trained AI/LLMs generate coherent and contextually appropriate language drafts that satisfy the specifications of axis focus group transcripts. Hayes (2025) adds the necessity of translation and thematic analysis of focus group transcripts as per the discursive flow maintained by each tool. Significantly, AI's real worth is premised on the capacity to maintain the cultural integrity and discursive context critical for successful thematic analysis.

Analysis

AI, LLMs, and NLP bolster online focus group data recording, transcription, and cross-language translation. Foremost, Olawade et al. (2025) confirm that AI technologies automate audio data transcription to significantly save on research time and expense. Furthermore, LLMs such as ChatGPT generate fluid and contextually coherent first drafts. In Dinh's (2025) study, ChatGPT rates higher than past translation systems in multilingual research because of its intrinsic ability to produce unified data drafts to support analysis (Dinh, 2025). In addition, the established drafts retain the discursive continuity that enables thematic analysis. In this literature analysis, human oversight is cited as a solution to the identified cultural sensitivity deficits that AI fails to address despite the excellence of modern AI/LLMs/NLP. In a qualitative research process, Belenguer (2022) contends that human oversight must be included in a manner that does not introduce bias or lead to privacy violations. As follows, a gap in knowledge regarding human oversight and its integration into the research process emerges from the literature review.

Conclusion

Utilizing AI/LLMs/NLP in online focus group research enhances researchers' ability to record, transcribe, and translate data for later analysis. As discussed in this literature review, AI can generate preliminarily coherent and fluid drafts appropriate for thematic analysis in the data processing stage. Nevertheless, the literature review does not provide clarity about how to manage human oversight as well as privacy or cultural complexities. Therefore, this literature review suggests conducting additional research to create systems and standards for appropriate human oversight to improve a studies' rigor and ethical standing.

Disclaimer:

The views expressed are entirely those of the coauthors, and therefore are not necessarily perspectives of the institutions associated with the coauthors. It is declared that there are no conflicts of interest. Furthermore, the coauthors are not responsible for any errors or omissions, and/or for the results obtained from the sources used to generate this review publication. The coauthors therefore bear no liability to any person for any loss or damage arising out of the inaccurate use of the information provided in the review.

References

Abdelhalim, S. M., Alsahil, A. A., & Alsuhaibani, Z. A. (2025). Artificial intelligence tools and literary translation: A comparative investigation of ChatGPT and Google Translate from novice and advanced EFL student translators' perspectives. *Cogent Arts & Humanities*, 12(1), 2508031. <https://doi.org/10.1080/23311983.2025.2508031>

<https://www.tandfonline.com/doi/pdf/10.1080/23311983.2025.2508031>

Al-Hamzi, A. M. S., Nababan, M., Santosa, R., & Anis, M. Y. (2024). Socio-pragmatic analysis of utterances with polite addressing terms: Translation shift across Arabic-English cultures. *Cogent Arts & Humanities*, 11(1), 2359764.

<https://doi.org/10.1080/23311983.2024.2359764>

<https://www.tandfonline.com/doi/pdf/10.1080/23311983.2024.2359764>

Belenguer, L. (2022). AI bias: Exploring discriminatory algorithmic decision-making models and the application of possible machine-centric solutions adapted from the pharmaceutical industry. *AI and Ethics*, 2(4), 771–787.

<https://doi.org/10.1007/s43681-022-00138-8>

https://pmc.ncbi.nlm.nih.gov/articles/PMC8830968/pdf/43681_2022_Article_138.pdf

Dinh, C. T. (2025). EFL students' perspectives on ChatGPT in translation: Exploring AI assistance, motivation, and learning outcomes. *Electronic Journal of e-Learning*, 23(2), 99–116.

<https://doi.org/10.34190/ejel.23.2.4006>

<https://academic-publishing.org/index.php/ejel/article/download/4006/2385>

Hayes, A. S. (2025). "Conversing" with qualitative data: Enhancing qualitative research through Large Language Models (LLMs). *International Journal of Qualitative Methods*, 24, 16094069251322346.

<https://doi.org/10.1177/16094069251322346>

<https://journals.sagepub.com/doi/pdf/10.1177/16094069251322346>

Huang, K., Mo, F., Zhang, X., Li, H., Li, Y., Zhang, Y., Yi, W., Mao, Y., Liu, J., Xu, Y., Xu, J., Nie, J.-Y., & Liu, Y. (2024). A survey on large language models with multilingualism: Recent advances and new frontiers. *arXiv preprint arXiv:2405.10936*.

<https://doi.org/10.48550/arXiv.2405.10936>

<https://openreview.net/forum?id=U77IS97dTT>

Jiménez-Crespo, M. A. (2025). Human-centered AI and the future of translation technologies: What professionals think about control and autonomy in the AI era. *Information*, 16(5), 387.

<https://doi.org/10.3390/info16050387>

<https://www.mdpi.com/2078-2489/16/5/387>

O'Connor Russell, S., Gessinger, I., Krason, A., Vigliocco, G., & Harte, N. (2024). What automatic speech recognition can and cannot do for conversational speech transcription. *Research Methods in Applied Linguistics*, 3(3), 100163.

<https://doi.org/10.1016/j.rmal.2024.100163>

<https://www.sciencedirect.com/science/article/pii/S2772766124000697>

Olawade, D. B., Omeni, D., Gore, M. N., & Hadi, M. (2025). Enhancing qualitative research through virtual focus groups and artificial intelligence: A review. *International Journal of Medical Informatics*, 106004.

<https://doi.org/10.1016/j.ijmedinf.2025.106004>

<https://www.sciencedirect.com/science/article/pii/S1386505625002217>

Parker, R. D., Mancini, K., & Abram, M. D. (2023). Natural language processing enhanced qualitative methods: An opportunity to improve health outcomes. *International Journal of Qualitative Methods*, 22, 16094069231214144.

<https://doi.org/10.1177/16094069231214144>

<https://journals.sagepub.com/doi/pdf/10.1177/16094069231214144>

Roberts, J., Baker, M., & Andrew, J. (2024). Artificial intelligence and qualitative research: The promise and perils of large language model (LLM) 'assistance'. *Critical Perspectives on Accounting*, 99, 102722.

<https://doi.org/10.1016/j.cpa.2024.102722>

<https://www.sciencedirect.com/science/article/pii/S1045235424000212>

Rosenberg, J., & Mojadeddi, Z. M. (2024). Automated transcription of interviews in qualitative research using artificial intelligence: A simple guide. *Journal of Surgical Research and Practice*, 5(2), 1–6.

<https://doi.org/10.46889/JSRP.2024/5204>

[https://www.academia.edu/download/116319309/Automated Transcription of Interviews in Qualitative Research Using Artificial Intelligence A Simple Guide.pdf](https://www.academia.edu/download/116319309/Automated_Transcription_of_Interviews_in_Qualitative_Research_Using_Artificial_Intelligence_A_Simple_Guide.pdf)

Shukla, A. (2022). Utilizing AI and machine learning for human emotional analysis through speech-to-text engine data conversion. *Journal of Artificial Intelligence & Cloud Computing*, 1(2), 2–4.

[https://doi.org/10.47363/JAICC/2022\(1\)/145](https://doi.org/10.47363/JAICC/2022(1)/145)

https://www.academia.edu/download/120193051/utilizing_ai_and_machine_learning_for_human_emotional_analysis_through_speechtotext_engine_data_conversion_2.pdf

Tolle, H., Castro, M. D. M., Wachinger, J., Putri, A. Z., Kempf, D., Denking, C. M., & McMahon, S. A. (2024). From voice to ink (Vink): Development and assessment of an automated, free-of-charge transcription tool. *BMC Research Notes*, 17(1), 95.

<https://doi.org/10.1186/s13104-024-06749-0>

<https://link.springer.com/content/pdf/10.1186/s13104-024-06749-0.pdf>

Yakhni, S., & Chehab, A. (2025). Can LLMs translate cultural nuance in dialects? A case study on Lebanese Arabic. *Proceedings of the ArabicNLP 2025 Workshop (AbjadNLP-1)*. Association for Computational Linguistics.

<https://aclanthology.org/2025.abjadnlp-1.13.pdf>

<https://coling-2025-proceedings.s3.us-east-1.amazonaws.com/workshops/AbjadNLP-2025/pdf/2025.abjadnlp-1.13.pdf>